Verify that this is the correct version before use

Compliance is Mandatory

Control of Nonconforming Product

Responsible Office: Safety and Mission Assurance Directorate

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Change History Log

Revision	Date	Originator	Description of Changes
Baseline	July, 2007	NT/Dave Dyer 281-483-4334	Initial Release. Previously numbered as SLP 4.13, Revision F. Converted to JPR numbering and template and placed under control of the JSC Directives System (JDMS) per JPR 1410.2D

P.   PREFACE

P.1   PURPOSE

The purpose of this document is to establish and maintain a consistent approach to ensure that product which does not conform to specified requirements is prevented from unintended use or installation.

This procedure applies to all products that are developed, manufactured, tested, or processed within the scope of the JSC Quality Management System.

Nonvolatile memory devices containing nonconforming software (firmware) shall be segregated and labeled in the same manner as hardware when they are removed from development systems or tools.

Note: For the purposes of this procedure, firmware is considered to be the same as software.

P.2   APPLICABILITY

This JPR is applicable to all JSC NASA organizations, including Ellington Field, and the Sonny Carter Training Facility, except for the following:

a.   White Sands Test Facility,

b.   Office of Inspector General,

c.   NASA Engineering Safety Center (NESC)

JSC directives may apply to contractors or grant recipients only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

P.3   AUTHORITY

(All document citations are assumed to be the latest version unless otherwise noted.)

a.   JPD 1280.1, *Quality Policy*

b.   JPR 1280.2, *Quality Manual*

P.4   APPLICABLE DOCUMENTS

(All document citations are assumed to be the latest version unless otherwise noted.)

a.   JPR 1281.1, *Management Responsibility*

b.   JPR 1281.8, *Product Identification and Traceability*

c.   JPR 1281.9, *Process Control*

d.   JPR 1281.11, *Control of Monitoring and Measuring Devices*

e.   JPR 1281.14, *Corrective Action, Preventative Action and Continuous Improvement*.

f.   JPR 1281.17, *JSC Audits*

g.   JPR 1440.3, *JSC Files and Records Management Procedures*

h.   JSC 26549, *Control of Program Stock*

i.   ANSI/ASQ Z1.4-2003, *Sampling Procedures and Tables for Inspection by Attributes*

j.   NT-CWI-001, *Task Performance Sheet (TPS)*

P.5   MEASUREMENT/VERIFICATION

a. Processes and procedures shall be measured and monitored as prescribed by JPR 1281.9, Process Control.

b. Audits, as prescribed in JPR 1281.17, JSC Audits, shall be used to verify conformance with requirements.

c. Results shall be reviewed by Directorates and the Center as prescribed by JPR 1281.1, Management Responsibility.

P.6   CANCELLATION/RECISION

This document cancels JSC SLP 4.13, Revision F, *Control of Nonconforming Product.*

Original signed by:

H. Lawrence Dyer
Manager, Management Integration Office

1.0   RESPONSIBILITIES

1.1   Directorate Level Organization (DLO)

The JSC process for controlling nonconforming product actually consists of numerous unique NPRS. DLOs are responsible for identifying any NPRS operating under their authority and appointing a NPRS Owner. The DLO shall notify the Quality Engineering Branch/NT4 of the existence of the NPRS for inclusion into the Registry of Authorized Nonconforming Product Reporting Systems (ref. Appendix D).

1.2   Nonconforming Product Reporting System (NPRS) Owner

Each NPRS Owner shall:

a.   Establish, document, and maintain a controlled process for assigned Nonconforming Product Reporting Systems in accordance with this JPR;

b.   Ensure the NPRS system has the capability to support trending and data analyses as needed by Product Owners;

c.   Ensure the personnel dispositioning nonconforming product are duly authorized.

1.3   Product Owner

The Product Owner shall:

a.   Identify the Nonconforming Product Reporting System to be used;

b.   Designate a Product Owner's representative, as appropriate, for activities during the product's life cycle; and

c.   Establish a process to identify personnel authorized to disposition nonconforming product.

2.0   PROCEDURE

2.1   Directorate Level Organization (DLO)

The DLO shall identify all Nonconforming Product Reporting Systems (NPRS) operating under the control of your organization and identify an owner for each NPRS. The DLO must provide the name, description, controlling document number, responsible directorate of office and point of contact to Quality Engineering Branch/NT4 for inclusion in registry of authorized Nonconforming Product Reporting Systems maintained in Appendix D. For inclusion or deletion from this registry, contact the Quality Engineering Branch/NT4.

2.2   Nonconforming Product Reporting System (NPRS) Owner

The NPRS owner establishes a documented Nonconforming Product Reporting System that begin with initial receipt or configuration control through delivery and usage of the product. As a minimum, the Nonconforming Product Reporting System process shall include the following elements:

2.2.1   Documentation of nonconforming items and notification of all affected parties shall include a detailed description of the nonconformance; location (by drawing reference point, hardware reference point, clock location, etc.); and exact callout of the violation by drawing or specification requirement (including sub-paragraph or illustration number). Dimensional violations documentation must include "should be" and "is" dimensions, and tool(s) calibration traceability numbers. NPRS work instructions are required to describe how nonconformance reports are initiated; identify who is responsible for initiating the documentation, who is required to be notified, and the required reporting period. This includes items identified after delivery from JSC or when the product has been put into use.   When applicable, notification includes reporting into the appropriate Program's Problem Reporting and Corrective Action (PRACA) system and/or initiation of a NASA Advisory or Government-Industry Data Exchange Program (GIDEP) documentation. For NASA Advisories or GIDEP documentation the JSC NASA Advisory Coordinator/NT4 must be contacted. (Note: The global address is JSC-NASA-Advisory-Coordinator or jscadvco@mail.nasa.gov).

2.2.2   Nonconforming items are to be identified (e.g. tag, mark, etc.,) and segregated from conforming items, when practical. This identification shall not be removed until the approved disposition is fully executed. For nonconforming software items where segregation is generally not practical, notification to the users is required for immediate determination of corrective measures necessary for continued use of that item.

2.2.3   Definition of responsibility for review and disposition of nonconforming product. The responsible authority shall evaluate the nonconforming product(s) to determine the appropriate disposition. This may involve troubleshooting, test, teardown, and/or failure analyses to determine the appropriate course of action.

2.2.4 The appropriate final dispositions unique to hardware, services, processed material or software shall be defined in accordance with the definitions in Appendix A. Additionally, the review of the process that led to the nonconformance may need to be assessed, refer to JPR 1281.9, *Process Control*, including other product(s) that previously went through the process.

2.2.5   Documentation of the disposition of the nonconforming product. The disposition shall include:

a.   A description of the action taken to deal with the nonconformance

b.   Acceptance, release or use of a nonconforming product that violates documented customer requirements, must be approved or concurred on by the customer or designated representative.

c.   The documented disposition is to be retained as a record per JPR 1440.3, *JSC Files and Records Management and Procedures*.

2.2.6   Conformance with specified requirements through re-inspection or retest repaired, rework, or fixed product shall be documented in the NPRS. Records of the re-inspection or re-test are maintained per JPR 1440.3, *JSC Files and Records Management and Procedures.*

Note: Work instructions describe how nonconforming product that has been reworked, repaired, or fixed is re-inspected or re-tested to verify conformance to specified requirements. The work instructions specify who approves and performs these tasks.

2.2.7   The NPRS shall define how corrective action necessary to prevent reoccurrence of the nonconformance is determined and tracked as well as who has who has the authority for approving these corrective actions and the systems used to track corrective actions. This may involve another system; i.e., Problem Reporting and Corrective Action (PRACA) necessary to prevent recurrence of the nonconforming product, if warranted, will be documented in the NPRS.

Note: The requirements for corrective action are addressed in JPR 1281.14, *Corrective Action, Preventative Action and Continuous Improvement.*

3.0   RECORDS

Records of the nature of nonconformities and any subsequent actions taken, including concessions obtained, shall be maintained (see 2.2.6).

APPENDIX A: ACRONYMS, TERMS AND DEFINITIONS

Term	Definition
Disposition	Action to be taken to deal with an identified nonconforming entity in order to resolve the nonconformance.
Dispositions Unique to Nonconforming Hardware, Services, or Processed Materials:	
Classification change:	Action taken to revise the classification status of an item for alternate uses. Classification identification will be per JPR 8080.5, Standard G-14.
Repair:	Action taken on a nonconforming product so that it will fulfill the intended usage requirements although it may not conform to the originally specified requirements. Note: When a product is produced to a customer's design or the nonconformity results in a departure from contract or customer requirements then this is not an acceptable disposition unless specifically authorized by the customer, i.e. requires a waiver.
Return to vendor:	Action to return a nonconforming product to its vendor for disposition.
Rework:	Action taken on a nonconforming product so that it will conform to specified requirements.
Scrap	Action taken to either destroy or excess nonconforming product that is not usable for its intended purpose. Product dispositioned for scrap will be conspicuously and permanently marked, or positively controlled, until physically rendered unusable.
Use-as-is	A disposition of a product with one or more nonconforming characteristics that is determined to be acceptable for its intended use in its existing condition. Note: When a product is produced to a customer's design or the nonconformity results in a departure from contract or customer requirements then this is not an acceptable disposition unless specifically authorized by the customer, i.e. requires a waiver.
Dispositions Unique to Software:	
Fix	Action taken so that the software fully conforms to the specified requirements.

Term		Definition
	No action	Usually results from a user error or misunderstanding of requirements.
	Operational note	Describes workarounds or ways to avoid the problem.
	User note	Explains or clarifies a peculiarity of the program that is not an actual requirement violation.
	Software Waiver	A disposition to use or release nonconforming software product which does not conform to specified requirements
DLO		Directorate Level Organization
GIDEP		Government-Industry Data Exchange Program
Nonconformance		A condition of any article, material or service in which one or more characteristics do not conform to requirements specified in the contract, drawings, specifications, or other approved product description. Includes failures, discrepancies, defects, and malfunctions.
Nonconforming Product Reporting System (NPRS)		A generic term for a system that is utilized for reporting, tracking, investigating, and dispositioning nonconforming product.
NPRS		Nonconforming Product Reporting System
NPRS Owner		Entity responsible for documenting, controlling, and administering the process(es) for a Nonconforming Product Reporting System.
PRACA		Problem Reporting and Corrective Action
Product		The result of a process. Generic products include hardware, software, services, or processed materials.
Waiver		A written authorization to accept a product which is found to depart from specified requirements, but nevertheless is considered suitable for use "as is" or after repair by an approved method.

APPENDIX B: SLP 4.10 CHANGE LOG

Rev.	Date	Originator	Description
Basic	09/04/97	David W. Dyer	This SLP incorporates and supersedes SLP 4.13-1 & -2 & -3.
A	02/20/98	David W. Dyer	Editorial changes to 2.0 Scope Removes working instruction references from section three In section 4, deleted referenced work instructions Removed reference to work instructions in section 3.0 Re-ordered definitions and added definitions for products other than hardware or software Section six, deleted the 11 nonconformance reporting systems Added editorial clarifications to procedures. (8.) Changed flow chart
B	1/15/99	David W. Dyer	Revised paragraph 7.4 to include obtaining the customer's written authorization for accepting nonconforming items with or without repair, when appropriate. Deleted reference to ND-CWI-004.
C	10/29/99	Chuck Bailey	Added that all nonconformance data is a quality record and deleted specific references in 7.4, 5, 6 Changed document structure to include the requirement to establish and maintain documented processes for Problem Reporting Systems in a single step (7.2). Added directorate Level Organization responsibility and procedure Added Problem Reporting System Owner responsibility and procedure Added ISO 9000 Office responsibility and procedure Changed the process to reflect the minimum DR system requirements, namely trend review & reporting, corrective action identification, and Problem Reporting System Registry
D	12/8/2000	David W. Dyer	Deleted references to the "core functions" in the Scope. Editorial revision to paragraphs 7.2, 7.2.4 and 7.2.5
E	06/30/2006	David W. Dyer	Re-write to add AS9100 requirements and update document.

F	11/07/2006	David W. Dyer	Modified Scope, replaced reference to JB9W-12A, *JSC Instructions for Excess and Disposal of Government Property* with AS9100 clause regarding scrap, and changed responsible organization from Safety, Reliability and Quality Assurance Office to Safety and Mission Assurance Directorate

APPENDIX C   REGISTRY OF AUTHORIZED NONCONFORMING PRODUCT REPORTING

Name	Description	Controlling Document Number.	Responsible Directorate or Office	Point of Contact
Quality Assurance Discrepancy Reporting and Tracking System	Process used to address nonconforming space flight and flight-like equipment, ground support equipment and some critical JSC facilities.	XXX.xxxx.xx (TBD)	Safety and Mission Assurance	David Dyer /NT4
Shuttle Training Aircraft Discrepancy Notice Program	Process used to address nonconforming Shuttle Training Aircraft and associated systems.	AOD33814	Flight Crew Operations	Pam Bieri /CC3
Distributed Defect Tracking System	Process used by the Aeroscience and Flight Mechanics Division/EG to address workstation hardware and software problems associated with Engineering projects.	EG-WI-0137	Engineering	Chet Lund /EG2
Systems Engineering Simulator Discrepancy Reporting System	Process used to track and resolve all hardware, software, and procedural nonconformances involving the SES.	SESOP2072 SESOP2130	Engineering	Mike McFarlane /ER7